

## **Feedback for future learning: delivering enhancements and evidencing impacts on the student learning experience**

Gartland, Kevan M.A.; Shapiro, Angela; McAleavy, Lesley; McDermott, Jamie; Nimmo, Alison; Armstrong, Melanie

*Published in:*  
New Directions in the Teaching of Physical Sciences

*Publication date:*  
2016

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication in ResearchOnline](#)

*Citation for published version (Harvard):*  
Gartland, KMA, Shapiro, A, McAleavy, L, McDermott, J, Nimmo, A & Armstrong, M 2016, 'Feedback for future learning: delivering enhancements and evidencing impacts on the student learning experience', *New Directions in the Teaching of Physical Sciences*, vol. 11, no. 1. <<https://journals.le.ac.uk/ojs1/index.php/new-directions/article/view/548>>

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

### **Take down policy**

If you believe that this document breaches copyright please view our takedown policy at <https://edshare.gcu.ac.uk/id/eprint/5179> for details of how to contact us.

# Feedback for Future Learning: Delivering Enhancements and Evidencing Impacts on the Student Learning Experience

**Kevan MA Gartland<sup>1,4\*</sup>, Angela Shapiro<sup>2</sup>, Lesley McAleavy<sup>3</sup>, Jamie McDermott<sup>4</sup>, Alison Nimmo<sup>3</sup> & Melanie Armstrong<sup>5</sup>**

Directorates of Research<sup>1</sup>, People<sup>5</sup>, Academic Quality and Development<sup>3</sup>, School of Health & Life Sciences<sup>4</sup>, School of Engineering & Built Environment<sup>2</sup>. Glasgow Caledonian University, Glasgow G4 0BA, Scotland

\*Corresponding Author: [Kevan.Gartland@gcu.ac.uk](mailto:Kevan.Gartland@gcu.ac.uk)

**Keywords:** *feedback, future learning, dialogue, engagement, reflection, enhancement*

---

## Abstract

Enhancing the student learning experience through the provision of improved student feedback is both challenging and complex. 'Feedback for Future Learning' was a Glasgow Caledonian University(GCU)-wide project intended to enhance feedback practices from both the student and staff perspectives; to ensure greater awareness of, and reflection upon, feedback by students; and to encourage greater use of feedback to inform future student learning. The design, implementation and evaluation of approaches to 'Feedback for Future Learning' are described with an emphasis on STEM disciplines. The conceptualisation, design and implementation of a range of student feedback tools and approaches aimed to develop understanding of learning processes, reinforce learning and improve performance. This was achieved through collaboration with the GCU Students' Association and the establishment of the University Feedback Enhancement Group. A series of generic and bespoke seminars, workshops, individual programme interventions and competitions were used to enhance comprehension of the perception, experience and use of formative and summative assessment feedback by students. Providing opportunities for reflection and evaluation together with qualitative and

quantitative metrics have demonstrated 93% satisfaction with student feedback enhancement workshops, a trebling of engagement with memorable feedback survey initiatives and an increase by 9% in satisfaction with assessment and feedback in the National Student Survey. A rise by 16% in student satisfaction with the promptness of feedback, an improvement by 14% in satisfaction with the detailed comments received and an increase by 8% in satisfaction with the helpfulness of comments received were achieved. The lessons learned inform the continuing and sustainable enhancement of the student learning experience for STEM students and the wider University community.

## Introduction

Enhancing the student learning experience through the provision and use of high quality feedback on assessed work is a common aim for many higher education institutions. Use of the National Student Survey (NSS) and numerous University 'League Tables', as proxy measures for student satisfaction, adds to the imperative to provide high quality student feedback. Such feedback can, when used appropriately, be a transformative agent for current and future learning (Gibbs 1988).

'Feedback for Future Learning' was a Glasgow Caledonian University (GCU) Senate sponsored initiative aimed at:

- Enhancing feedback practice by academic staff
- Ensuring greater awareness of and reflection upon, feedback by students

In this context NSS feedback satisfaction indicators were considered as suitable surrogate measures of progress:

- Feedback on my work has been prompt
- I have received detailed comments on my work
- Feedback on my work has helped me to clarify things I did not understand

Other indicators, such as student engagement with feedback enhancement activities and free form comments gathered from staff and student events, must also be included in any evaluation of feedback enhancement interventions, if a rounded view of their effectiveness was to be obtained. By deliberate design, these interventions were the outcomes of the 20-member Feedback Enhancement Group, an active partnership among students through their Students' Association Officers and school-based representatives, academic and professional services staff. The Feedback Enhancement Group worked together to design ways to enhance student feedback and future learning through a dialogic approach (Beaumont et al., 2011) across a 13,241 full-time equivalent student university with campuses in Glasgow and London (GCU, 2015).

## Feedback principles

Informed by the work of the National Union of Students 'Feedback Amnesty' Campaign (NUS, 2009) and previous academic studies (Nicol, 2010; Hounsell et al., 2008), a set of eight 'Feedback Principles' was designed and road-tested with University-wide staff groupings (Figure 1). Staff were encouraged to buy into these principles, in particular how greater engagement by students with feedback through dialogue, asking questions and seeking clarifications, could enhance current and future learning. During the design and road-testing process, most debate centred

upon the timely nature of feedback, with staff feeling that a three working weeks window was needed and realistic for the diverse range of modules undertaken with some class sizes exceeding 600 students. The active involvement of student representatives in this design and road-testing process was invaluable in gaining further traction throughout the University community.

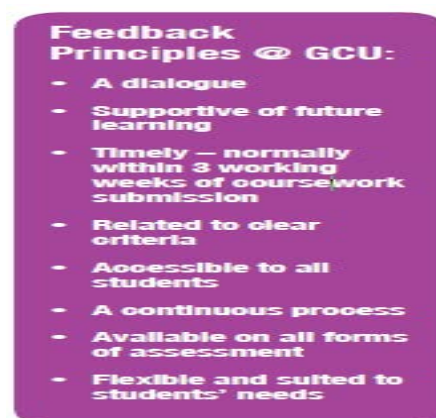


Figure 1 GCU Feedback Principles

Once agreed the 'Feedback for Future Learning' campaign, as it became known, moved into a coordinated programme of enhancement activities.

## Feedback enhancement activities

A series of 16 'Feedback for Future Learning' events for staff were held with a range of external and internal speakers; all of whom were encouraged to share their views and experiences of how student engagement with feedback could be improved to benefit the student learning experience. Topics ranged from promoting dialogue, encouraging greater engagement, and applying aspects of educational and motivational psychology, to sessions on how e-tools such as blogs, text walls, virtual learning environments, and rubric-based, video and audio feedback tools could be used to enhance feedback. A 'Feedback Fair' organised with colleagues from the University's central academic development department, GCU Learning Enhancement and Academic Development (LEAD), to encourage sharing of good practice was attended by more than 100 colleagues. A unique design feature offered opportunities where staff could play the role of students through innovative 'Feedback Theatre'

sessions. Some of these events also received sponsorship from the Higher Education Academy. Complementary workshops were developed for staff groups such as those undertaking the PgC in Learning & Teaching in Higher Education, new Graduate Teaching Assistants and for student groups. More than 120 'Feedback for Future Learning' workshops were delivered to 1,550 students across the University. These workshops utilised the eight 'Feedback Principles', to help students explore why engagement with feedback was important, and identify personal preferences for receiving and reflecting on feedback to feed-forward and enhance their future learning. The conscious competence learning matrix approach (Broadwell, 1969) was contextualised, to explore using feedback to achieve new competences using examples from real-life situations including job interviews, as well as academic settings. Three simple approaches the 'plus-minus-interesting' action tool (de Bono, 1995), thinking styles tool and perspective broadening 'helicopter view' tool (Vivyan, 2010) were used to provide a structured approach to help students view feedback positively, promote reflection and enhance future learning performance. Signposting to sources of further support was provided. Participants were invited to complete a short evaluation form giving feedback on the workshops (Gartland et al., 2015).

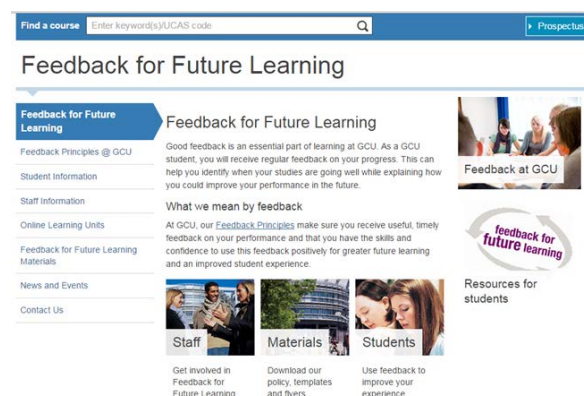
In parallel to this, promotional materials including social media messages, pop-up banners, bookmarks, fliers and T-shirts were distributed throughout the University. Learning from previous good practice, a 'Memorable Feedback Competition' (Scott et al., 2011), allowed further informal measures of student engagement with feedback to be obtained.

## Sustainable feedback resources

### University-wide resources

More than 50 'Feedback for Future Learning' resources have been compiled, ranging from simple feedback templates to experiential videos. Topics such as feedback through live marking, use of textwalls, building formative feedback into lectures, using portfolios for laboratory skills modules for both feedback and feedforward as well as discipline specific videos have been provided. Presentations on

diverse subjects including audio feedback, use of virtual worlds, and automated software for feedback are also included. These resources are widely used across the university and are freely available (Figure 2; Glasgow Caledonian University, 2016).



**Figure 2** Feedback for Future Learning Materials [www.gcu.ac.uk/futurelearning/](http://www.gcu.ac.uk/futurelearning/)

They are used in student induction events, by School-based Learning Development Centres, and include online learning units for self-paced learning on:

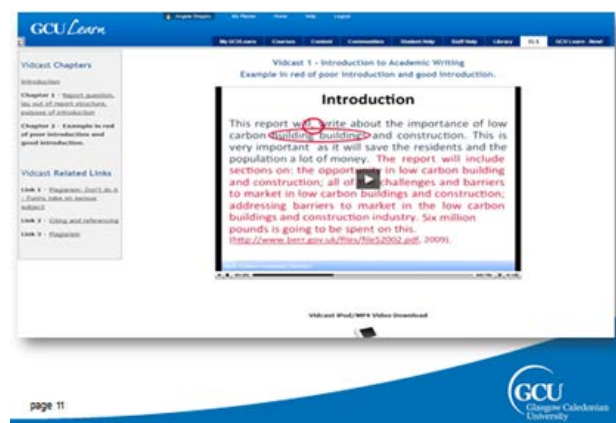
- Being a Student
- Feedback and You
- Using Feedback Successfully
- Changing Your Perspective of Feedback
- Reflecting on Feedback.

### STEM-specific resources

An action research project was carried out with the aim of exploring how online learning resources could be used to provide timely feedback to students in the Built and Natural Environment (BNE) disciplines through vidcasts. This was set in the context of enhancing academic writing skills through online feedback. The design process utilised the concept of feedback being the modification or control of a process or system by its results or effects, for example in a behavioural response. Four vidcasts were developed which used a blend of narrated audio, on screen images and slides (Traxler, 2008; Shapiro and Johnston, 2010). The first vidcast introduced academic writing including how to write a paragraph at micro level and how to apply scientific referencing conventions.



Animated sequences were used to highlight errors throughout the paragraph (Figure 3).



**Figure 3** Screenshot of 'Introduction to Academic Writing' Vidcast

The second vidcast considered the planning, construction and writing of a scientific report, including detailed breakdowns of appropriate materials for each report section, whilst features of group reports were considered in the third vidcast. The final vidcast was aimed at executing a complex report using a case study format. The vidcasts were supported with additional web-based materials and were set within the context of exploring new assessment and feedback practices to support the development of self-regulated learners in the BNE disciplines (Nicol and MacFarlane-Dick, 2006; Shapiro and Johnston, 2011). Poll Everywhere, an interactive audience response system that uses mobile phones, Twitter and web-based tools was used to gauge immediate feedback on the academic writing vidcasts (see Figure 4).

### How do you reference a website in the text?

To join this session, send a message using the keyword 41140

Text a **CODE** to +447624806527 Tweet @poll and a **CODE**

Submit a **CODE** to <http://PollEv.com>

I write down the complete url address	1
I write down the corporate author and year	2
I note the url, the corporate author and year, the name of the website and the date I accessed the website	3
I note the website address	4

Total Results: 4

**Figure 4** Example of a Poll Everywhere Question

## Outcomes

From 1,200 workshop evaluations received, 93% of students considered the 'Feedback for Future Learning' workshops to be worthwhile. Of the remaining 7%, the most frequent reason offered was of previous familiarity with the content. Key themes included increased awareness of the need to be proactive and to take control of academic feedback. There was considerable evidence of students benefiting from learning how to reflect on feedback, and how to use feed-forward to benefit their future learning and potential employment. Student comments included: "made me more confident to ask questions about my feedback" and "made me think about how I react to feedback and what to do to get the most out of it". These comments were heartening, as 'responsibility' is one of the GCU 'Strategy 2020 Values' (<http://www.gcu.ac.uk/strategy2020/>).

Overall, students considered that the most important principles were that feedback should be:

- Timely
- Related to clear criteria
- Accessible to all students

Surveying of 450 STEM students views identified that reflecting on feedback was important to:

- Help us progress
- Know what you are doing
- Show areas for improvement & where we excel

The specific academic vidcasts on writing for the BNE-disciplines were viewed 1,583 times in one academic session, with users indicating that they found the vidcasts, and in particular navigation through the chapters, easy to follow. Poll Everywhere results from BNE students were surprising, with students preferring to ask questions during scheduled sessions, rather than provide personal information using their mobile phones. This may be due to students not wanting to provide their mobile phone numbers, incur texting costs, lack of time, or simply due to survey fatigue (Porter et al., 2004; Porter and Whitcomb, 2005). Immediate response systems may also suffer from a lack

of time for reflection and be products of students' own perceptions of their cognitive development levels (Clouder, 1998).

In terms of the NSS, the university-wide 'Feedback for Future Learning' campaign achieved an increase by 9% in overall 'Assessment & Feedback' satisfaction, including increases of:

- 16% in 'Prompt Feedback' satisfaction
- 14% better 'Detailed Comments'
- 8% improved 'Helpful Comments'

Three 'Memorable Feedback' competitions were held, with entries trebling to 600 over three sessions, and 1,200 in total. Students demonstrated a greater knowledge of the different types of feedback they had received. Freeform comments demonstrated an increased recognition of the need to be proactive in reflecting upon feedback comments and take responsibility for their own learning. The improved NSS 'Assessment and Feedback' scores reflect the effectiveness of the materials developed, greater awareness and enhanced commitment of staff across the university to the importance of providing high quality feedback, and student recognition of the importance of dialogue and reflection as part of the learning experience.

## Embedding impacts

All new GCU students can access 'Feedback for Future Learning' materials from induction onwards and the centrally produced resources continue to be available to all members of the University community. The University's Academic Schools are now responsible for feedback enhancement, which is incorporated into annual action-planning, and a reduced level of central support remains available. Whilst feedback practice has been enhanced through this initiative, the University has recognised the need to maintain a focus on this aspect of the student learning experience. As a result, 'Feedback for Future Learning' is now part of central student engagement activity at GCU, and was recently mainstreamed into core quality enhancement and assurance processes.

## Acknowledgements

The authors wish to thank all members of the Feedback Enhancement Group, including Students' Association Officers and student class reps, and Aidan Johnston for their help and contributions to the enhancement of student feedback at Glasgow Caledonian University. The Higher Education Academy is thanked for sponsorship of three 'Feedback for Future Learning' seminars.

## References

- Beaumont, C., O'Doherty, M. & Shannon, L. (2011) *Reconceptualising assessment feedback: a key to improving student learning?* Studies in Higher Education 36(6): 671-687. DOI:10.1080/03075071003731135.
- Broadwell, M.N. (1969) *Teaching for learning*. The Gospel Guardian 20: 1-3a.
- Clouder, L. (1998). *Getting the 'Right Answers': student evaluation as a reflection of intellectual development?* Teaching in Higher Education. 3(2), pp. 185-195. DOI:10.1080/1356215980030205.
- de Bono, E. (1995) *Serious creativity*. Journal of Quality and Participation 18: 12-18.
- Gartland, K.M.A., Armstrong, M., McAleavy, L., McDermott, J., Shapiro, A. (2015) *Feedback for Future Learning*. Enhancement Themes Conference, QAA Scotland. <http://www.enhancementthemes.ac.uk/pages/docdetail/docs/posters/reflections-on-delivering-enhancements-and-evidencing-impacts-on-the-student-learning-experience>
- Gibbs, G. (1988) *Learning by doing: a guide to learning and teaching methods*, Further Education Unit, Oxford Polytechnic, Oxford.
- Glasgow Caledonian University (2015) Annual Financial Statement, 2014-15.
- Glasgow Caledonian University (2016) *Feedback for Future Learning Resources*. <http://www.gcu.ac.uk/futurelearning>
- Hounsell, D., McCune, V., Hounsell, J., Litjens, J. (2008) *The quality of guidance and feedback to students*. Higher Education Research and Development 27: 55-67.

DOI: 10.1080/07294360701658765.

National Union of Students (2009) *The great feedback amnesty*. NUS HE Focus 1.

Nicol, D. (2010) *From monologue to dialogue: improving written feedback in mass higher education*. Assessment and Evaluation in Higher Education 35: 501-517.  
DOI:10.1080/02602931003786559.

Nicol, D. J. and Macfarlane-Dick, D. (2006) *Formative assessment and self-regulated learning: A model and seven principles of good feedback practice*. Studies in Higher Education 31 (2):199-218.  
DOI:10.1080/03075070600572090.

Porter, S.R. and Whitcomb, M.E. (2005) *Non-response in student surveys: The role of demographics, engagement and personality*. Research in Higher Education 46(2): 127-152.  
DOI:10.1007/s11162-004-1597-2.

Porter, S.R., Whitcomb, M.E. and Weitzer, W.H. (2004) *Multiple surveys of students and survey fatigue*. New Directions for Institutional Research 121:63-73. DOI:10.1002/ir.101.

Scott, J., Shields, C., Gardner, J., Hancock, A., Nutt, A. (2011) *Student engagement with feedback*. Bioscience Education 18-5.  
DOI:10.3108/beej.18.5SE

Shapiro, A. and Johnston, A. (2010) *From Workshop to Vidcasts: Reflections on Students' Learning*. International Journal of Technology Enhanced Learning 2(3): 244-251. ISBN-978-3-642-13165-3.

Shapiro, A. and Johnston A. (2011) *Bridging the feedback divide utilising inclusive technologies*. In: ECEL, ed. 10th European Conference on e-Learning, University of Brighton. University of Brighton, pp.821-825.

Traxler, J. (2008) *Podcasting in context*. In: Simon, G. and Edirisingha, P. (Eds.) Podcasting for learning in UK universities. McGraw-Hill Education pp. 12-19. ISBN-10 0 335 23429

Vivyan, C. (2010) *The Helicopter View*. Get Self-Help Company.  
<http://www.getselfhelp.co.uk/docs/HelicopterWorksheet.pdf>